



sector:	health care
project:	Renovation of existing senior home Zoniën, Tervuren, BE
total cost price	€ 1.150.000,00
total area	1.150 m ²
Study start date:	May 2017
completion date	In execution
nature of work	Renovation: study and following up MEP
cost techniques	€ 554.790,95 excl. VAT
client	OCMW Tervuren, Markt 7a bus 3, 3080 Tervuren, BE
architect	CONIX RDBM Architects bvba, Londenstraat 60/121, 2000 Antwerp, BE

description

The nursing home care facility “Zoniën” has now entered its second phase of their renovation project. The existing entrance will be renovated to connect the common areas of the two nursing home departments and their numerous workspaces. An additional task is to refresh the indoor climate of the cafeteria.

The challenge for this project is finding the balance between using the existing installation to fill in the energy demand or, to involve a sustainable energy installation, planned for the new construction in the first phase, in order to monitor the requested comfort. A combination of both was opted for.

A connection to the current BTES (Borehole Thermal Energy Storage) system will be made to feed a new geothermal heat pump to address the extra demand for space heating. Based on the BTES system, the installed heat exchanger plate will provide passive cooling to monitor summer comfort. For the production of domestic hot water there will be a link to the central heating installation made up of a number of gas condensation boilers and a classic boiler, allowing maximum use of the renewable energy source on site.

For the distribution of fresh air and taking into account the height restrictions of the existing floor construction layers, 4 piped fan coil units were chosen due to its flexible reaction time and installation characteristic. Two air handling units with a D system will ensure adequate and healthy ventilation in the care facility. One unit will be placed on the roof above the renovated entrance. The other will be installed in a limited technical space next to the cafeteria to provide hygienic ventilated air. Both air handling units are equipped with a heating and cooling coil connected to the BTES system that thermally pre-treats the air.

With regards to the electrical installation, the existing nursing call system will be extended in the renovated areas and the data network for DECT and WIFI applications will also be renewed.

general data

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geothermal
energy



comfort



passive cooling



heat recovery



louvres